DOCUMENT RESUME

ED 225 507 HE 015 869

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TITLE	Intellectual Capital Formation.
INSTITUTION	National Association of Coll. and Univ. Business Officers, Washington, D.C.
PUB DATE	Jan 83
NOTE	8p.; Paper presented at the Annual Meeting of the National Association of College and University Business Officers (1982).
AVAILABLE FROM	National Association of College and University Business Officers, One Dupont Circle, Suite 510, Washington, DC 20036.
PUB TYPE	Viewpoints (120) -- Journal Articles (080)
JOURNAL CIT	Business Officer; p23-28 Jan 1983
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	College Second Language Programs; *Educational Needs; Educational Policy; Functional Literacy; Higher Education; *Human Capital; Illiteracy; *Intellectual Development; Labor Force Development; Loan Repayment; *Second Language Instruction; Student Financial Aid; *Student Loan Programs; Teacher Education; Tuition

ABSTRACT

Issues that are relevant to promoting the intellectual potential and trained competence of the U.S. population are addressed. Important concerns include the following: preventing retardation among unborn children and young children; providing essential early childhood experiences through programs such as Head Start; and insuring literacy among high school graduates. It is proposed that a phonetic system of reading instruction be reinstituted and that U.S. schools begin the practice of administering tests such as Great Britain's "A-level" and "O-level" examinations to determine students' overall learning progress. In addition, high admission standards by colleges of education can help insure the preparation of qualified teachers. It is suggested that intellectual capital formation is threatened by cutbacks in foreign language instruction and federal student financial aid. A Tuition Advance Fund (TAF) is recommended as the best approach to finance higher education. TAF would allow degree candidates to be advanced up to $7,500 (in 1982 dollars) to educational expenses, of which no more than $1,000 could be for nontuition expenses. After graduation, students would repay through a new payroll withholding tax. Funding for the program could come from programs that TAF would replace. (SW)

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1982 NACUBO Annual Meeting Presentation

Intellectual Capital Formation

by JOHN R. SILBER

I have often been asked by students, usually irate ones, why I run Boston University like a corporation. That is a very easy question to answer: because it *is* a corporation, incorporated under the laws of the Commonwealth of Massachusetts. That rhetorical answer, however, does not get at the substance of the question.

The same question is asked at times by faculty who are troubled by what they regard as our policy of operating under a balanced budget. Actually, we no more have a policy of balancing the budget than a man who jumps out of a window has a policy of observing the law of gravity. The same holds, of course, in the running of nations, except that with nations not everyone recognizes this truth.

When I acknowledge that Boston University has to balance its budget, I am simply fulfilling my fiduciary responsibility. The institution must be viable after I leave office so that generations of students and alumni at Boston University will still have an alma mater. Boston University, though a nonprofit institution very different in its purposes from a profit-making corporation, is in some respects a business like any other.

For example, we sell about 30,000 meals each day and put about 10,000 guests in our hotels. The fact is that we run a very extensive business operation with an operating budget of about $300 million each year. That means we must be able to call on the same range of expertise that is available to a large corporation.

Over this last decade, as a consequence, I have received a continuing education in the realities of the business office from my vice president for finance, Charles W. Smith. One will not be able to accomplish any educational purposes in a university without strict attention to the financial and business realities that are attendant upon its operation. Charles Smith has, through his fiscal wizardry, enabled us to do things academically that we could not have done without his talents.

He has arranged bank loans that are so entrepreneurial as to unsettle some members of the banking community of Boston. We are proud that we have some loans at a floating interest rate of 50 percent of prime, and we wear that expertise and that business acumen, that entrepreneurial zip, as a badge of honor. If not for the services performed by Charles Smith, we would be paying $2.7 million more than we actually pay for the loans he obtained under this arrangement. We have $2.7 million more than we would otherwise have for our academic programs. It is very much in the interests of faculty and students that—in those areas where business criteria are appropriate—we run the university as much as possible like a business.

Those of us who must consider the fiscal side of university operations enjoy none of the seclusion of the ivory tower; rather, we confront serious economic forces on a daily basis, and we recognize the extent to which our economic fortunes are determined not by ourselves, not by the stars, but by political influences.

We are aware, for example, of the far-reaching implications of the Reagan Administration's dedication to supply-side economics as a means to stimulate productivity. Whatever our attitude in detail toward Reaganomics, we all see the importance to productivity of capital formation. Even the most skeptical analyst of the Administration's fiscal policy will admit that concern for capital formation is a crucial element in the attainment of prosperity.

It is clear that if we invest in research and development and in productive facilities, we make a good start toward enhanced capital formation. The Administration encourages increases in productivity by encouraging savings that can be used for productive investment. President Reagan's budget has, for example, increased support for research and development through transfers of research funds from the Department of Health and Human Services to the Department of Defense. The research money is still committed and is going to be spent: we can anticipate that at least as many university professors will be supported under the Reagan proposals for grants and contracts as would have been supported under Democratic policies.

Curiously, however, the budget proposes a substantial reduction in funds for the development of engineers and the teaching of engineering. This is counterproductive, for the failure to develop the people who must do the research, design the complex machinery, and manage the factories will inhibit productive activity. Formation of intellectual capital is, quite simply, as important as formation of traditional capital. Intelligence and trained competence are no less important than buildings and machinery. Though even less tangible than financial capital, intellectual capital is just as real, and the means

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for its formation must be of great concern to anyone wishing a prosperous society or, indeed, a just and decent one.

The formation of intellectual capital is a complex matter with many facets. It begins far from the workplace in the growth of the brain cells of developing individuals who will one day invent, staff, and manage the workplace. Our concern for the individual must start before birth: in fact, at the point of conception. That malnutrition of carrying mothers leads to irreversible brain damage is a widely accepted scientific fact. This gratuitous retardation —retardation that could be easily avoided—seriously impairs the development of intellectual capital. A society that fails to deliver close to 100 percent of its children to the first grade with all of their brain cells intact is making a fundamental and wasteful error. Such a failure reduces the pool of high intelligence that will be available later and it produces citizens who, as gratuitously retarded, may impose serious costs on society as criminals, as inmates of state-supported institutions, and as welfare recipients.

Although this kind of retardation is irreversible, it is not inheritable. In every new generation the full complement of brain cells is available for full development in the fetus. Gratuitous retardation does not strike at the gene pool, but rather at the stock of intellectual capital that has fueled man's progress from savagery to barbarism to civilization.

Our first priority, if we wish to encourage the formation and retention of intellectual capital, must thus be a nutritional program that insures the survival of brain cells *in utero* and during the first six years of life. These are the years during which most of the physiological development of the brain takes place. For comparatively low costs, we can have a very high return in productivity simply by making certain that children in those stages are properly fed.

A comprehensive program of nutritional education and supplementation, precisely targeted on carrying mothers and infants, would, without reliance on the widely abused food stamp program, prevent malnutrition and promote recovery of an immense amount of intellectual capital that is now wasted. This could be done cheaply and quickly (within 15 years) at a great saving to the taxpayer.

Additionally, by quite modest investments in preschool education, we could deliver to the classroom children who are prepared to learn. I will never forget the comment made by a first grade teacher from a slum school: "I can't begin class by saying, 'Children, pick up your pencils'; I must hold up a pencil and say, 'Children, this is a pencil; now pick up *your* pencils.' " The continuation and intensification of the work of such programs as "Sesame Street" are essential if certain students are not to arrive in kindergarten as strangers in a strange land. We must be sure that the right kind of preschool experience is available for children who grow up in homes without crayons and pencils and without opportunities to look at books, to learn to interpret pictures, and to listen as well as hear. A Head Start program of substantial scope, extending for one to two years prior to kindergarten, will pay for itself many times by fostering the development of more effective adults who produce income and pay taxes rather than receive welfare.

We will lose most of the gains to be made by such programs, however, if we merely deliver alert prepared five- or six-year-olds to an educational system that cannot provide the most elemental services for which it is designed. We must go on to restore the educational standards that were achieved in many places (through not as widely as we would like) in the nineteenth century. We cannot doubt that those standards are in serious disarray.

Some years ago, a state board of education decided to tighten standards, and so it passed a resolution. No one, the board decreed, was to be given a diploma from one of the state's four-year colleges unless he or she could read and write! If there is consolation in this grim story, it is that any observer would recognize the intellectual and moral bankruptcy of a college that not only admitted illiterates, but failed in four years to correct their illiteracy and then granted them diplomas anyway. The action of the state board presumably put an end to such extraordinary intellectual and moral corruption.

Unfortunately, we are more tolerant of the high schools that graduate illiterates and send them on to college, for there is widespread recognition of the fact that our secondary schools are unsatisfactory. However, there is inadequate realization that a school system has failed utterly when, having had the required attendance of students for a dozen years, and having spent many thousands of tax dollars on each student for an education, it does not bring those students to basic literacy. It is guilty of gross misappropriation of tax moneys and, still worse, of human lives.

There is no reason why America should put up with this misappropriation. And it is peculiarly an American problem. In other countries, children go to school and as a matter of course learn to read and write their native language, whether that language is easier to learn to read than English, such as German or Italian, or much harder, such as Japanese. And they do it, most significantly, in schools where the language is English itself, such as in the United Kingdom, Australia, and New Zealand.

In all these cases, basic literacy is not something attained laboriously after 12 years if at all; rather, it is attained within the first few years and provides the foundation for a public school education that terminates at a level equivalent to the second year of college in the U.S. Anyone who doubts this should look at a set of the ordinary, or "O-level," examinations taken by most high school graduates in Great Britain. These would be challenging for most American college upperclassmen. The advanced, or "A-level," examinations, taken by all applicants for college admission, are still more demanding. These would make excellent comprehensive examinations for college seniors in the United States.

No college or university in the United States would dare to make the "O-level" examinations—even if adapted for the American experience —conditions of admission. They would empty even Harvard by failing most of the applicants. As a matter of fact, college presidents in this country would sleep better if they thought that faculty could pass the "A-levels" outside their own specialties. And public school principals would sleep better if they thought their teachers could pass "O-levels," even in their specialties.

It is appalling, moreover, to realize that the American disease of illiteracy is not mysterious in origin. It arose when the schools abandoned the proven phonetic method of teaching reading and replaced it with the word-recognition method. Apparently, the latter was adopted because of the discovery that English is not spelled with phonetic exactness. For

reasons best known to professional educators, they tried to teach English as if it were Chinese, without connection between sounds and writing. This method operated on the ridiculous assumption that English, not being perfectly phonetic, is not spelled phonetically at all. It thus deprived students of the immense advantage to be gained by understanding that English is a significantly phonetic language and that the alphabet is the key to reading.

Certain students gifted with excellent visual memories learned well under these conditions. But millions with at least average intelligence floundered unnecessarily in the attempt to learn to read and write through this perverse but fashionable technique.

The federal government estimates that 20 percent of Americans are functionally illiterate—that is, unable to read or write at a practically useful level. The existence of these 40 million illiterates is a national scandal requiring massive action. I do not propose to throw money at the problem, although money is certainly needed. Rather, school boards all over the country should institute programs in the evening, on Saturdays, and at other convenient hours to promote literacy; our colleges and universities should do the same. Such programs will require millions of teachers of literacy, and it is essential that there be a commitment on the part of millions of literate Americans to donate time for tutoring. Illiteracy can be wiped out quickly with a minimal effort if enough literates recognize the obligation they have to the nation's illiterates, who are willing to learn and unwilling to remain in ignorance. It is not only the duty of literates; it is also in their self-interest.

In addition to cure, we need prevention, which will be much cheaper. It requires, first and foremost, rational reading materials such as those developed by the Open Court Publishers; these materials guide young Americans into the birthright of their literacy through phonetic instruction. The parents of children who are of at least normal intelligence but who are not learning to read should refuse to accept excuses from the schools. They should demand from those schools—as a taxpayer's right—a phonetic system of instruction in reading that leads to success rather than failure. Nor should school boards accept excuses. Our present problem of illiteracy is a self-inflicted national wound representing millions of personal tragedies. As we enter an increasingly technological age, it is increasingly clear that this tragedy also threatens our national survival. (Note that the armed forces must rewrite service manuals as comic books because enlisted men cannot read instructions.)

This deficiency at the base of our educational system corrupts everything above it. The most useful role I can imagine for the Department of Education or for its successor organization would be that of the keeper of a National Bureau of Educational Standards that would make available American equivalents of the "O-level" and "A-level" tests. These tests, administered to the students in school districts, would give the school boards, the teachers, the parents—and the students themselves—a fair index of how well students are fulfilling their intellectual potential.

Another key element in capital formation is the providing of excellent teachers. Fifty years ago, when teaching was practically the only dignified employment open to women, exceptionally gifted women became teachers. Anyone much over age 40 will remember the formidable women who entered the profession before Pearl Harbor. The transformation of the workplace that began with Rosie the Riveter has brought women a welcome and rightful improvement in equality of opportunity, but it deprived the schools of a great advantage in recruiting superior employees.

Today, the situation is much different. The courses required in most schools of education serve as a kind of reverse intelligence test, and at the majority of our schools and colleges the average SAT scores of the education students are among the lowest. Only deliberate and long-term efforts, such as those undertaken at Boston University, to limit admission to well-qualified students can reverse this deadly pattern.

A further negative influence in the public schools became widespread after World War II: the promotion primarily of males into the principal's office without regard to competence. The least able of these, fearing competition from the more gifted women on their staffs, frequently drove these women away. Incompetence was then free to promote incompetence through the ranks, and the management of our schools became less and less effective.

Ironically, just as this decline in personnel became serious, the taxpayers began to feel guilty about the inadequate pay scales that had traditionally been offered to teachers. Around the country, school boards raised the salaries paid to an employee pool of declining quality. The decline of professional idealism was thus accelerated by the inducement of material reward. Although teaching is still no way to get rich, it is now a profession that one might well enter for its economic attractions and its extended vacations. A teacher earns, on the average, $20,000 a year and spends 180 days a year teaching; that gives the teacher a per diem income vastly higher than that of the average American worker. And the nature of the work is exceptional: it is exciting to devote one's life to nothing less inspiring than the development of human beings.

Thus, as a result of weak education curricula, burdensome certification requirements, lowered standards of professional competence, and increased compensation, the level of idealism and the commitment to teaching are much lower than they were before World War II.

This can be seen clearly in the rise of teachers' unions that are willing, through extended strikes, to deprive students of education that can never be replaced. One can hardly blame the national leadership of these unions for doing what union leaders have always done: trying to improve the economic status of members. Nevertheless, serious consequences have flowed from the elevation of economic gain to first priority among teachers.

As unionization becomes more widespread and the demographic decline leads to layoffs, seniority determines that the youngest teachers are laid off first. Those who insist that the retention of a mediocre teacher of 20 years' experience is preferable to the retention of a superb one of 10 years' experience undermine the morale of most teachers and deprive our children of their right to be taught by none but the best.

Boston is an interesting, if perhaps extreme, example; the pathologies of its school system are reflected to lesser degrees elsewhere. A recent newspaper series noted the very high absenteeism rate of Boston teachers, a rate substantially higher than that of the rest of the country. Boston teachers, it seems, are most likely to fall ill on Friday or Monday, or at the end of the term, or in the months prior to retirement. This is, one sus-

pects, because Boston teachers have generous sick leave that can be accumulated indefinitely, and they are not required to certify their absence as illness-related.

When a Boston teacher calls in "sick" after a long weekend, his or her students are likely to be taught by a teacher who knows little or nothing of the subject or of the curriculum. Under such conditions, decorum may be maintained but education stops.

The success of public education in promoting intellectual capital formation depends not only on the intellectual and professional excellence of teachers, but also on the content of curricula. Intellectual capital formation is threatened by cutbacks in foreign language instruction that are mandated by current budget proposals. If there is an area of grotesque inadequacy in primary, secondary, and college education in the United States, it is in foreign languages. Fewer than 4 percent of our high school graduates have as many as two years of foreign language instruction. It was not always this bad: in 1915, more than one-third of the students in high school were studying a foreign language; in 1976, less than one-fifth were doing so.

The United States is unique in the world in allowing students to graduate from college, and even to earn doctorates, without any foreign language training. Sadly, we have colleges—one-fifth of *all* two-year colleges—that offer *no* foreign language! Perhaps the best index of the situation is that the Foreign Service can no longer require knowledge of a foreign language for entrance into its ranks. It is no wonder that President Carter could not find a single person competent to translate for him on his state visit to Poland.

Still worse, we are at an increasing disadvantage in international trade because we have so few salesmen who speak the languages. One can buy in any language, but one must sell in the language of the buyer. There are 10,000 Japanese salesmen in New York City, all of whom speak English; of the handful of American salesmen in Japan, only a few speak Japanese. Of the one-fifth of Americans who have at least a passing acquaintance with a foreign language, the great majority know only Spanish, French, or German. Except for immigrants, we have essentially no speakers of Portuguese in this country, yet this language will begin to be of vital importance to us in the decades to come as Brazil begins to achieve its potential. We are inadequate in our knowledge of Russian. We are also inadequate in our knowledge of Chinese and Japanese, and these are the major Oriental languages. Vietnam is now the third most populous communist country, yet two years ago only 29 students were studying Vietnamese in this country. Had we not been so ignorant of this language in the early sixties, the outcome of our relationship with Vietnam might have been quite different. We may have enough native speakers of Spanish to meet our needs, and we may assume that the rest of the world will learn English. However, making such an assumption may not be very intelligent unless we can also meet our national needs for speakers of Russian, Chinese, Portuguese, and Japanese.

To cut back budgets that were inadequate from the start is simply to ignore a problem that will not go away. The language dilemma cannot be solved by allocating more money to colleges and universities, but by providing incentive grants to the primary and secondary schools of local communities. In perhaps 100 school districts we should offer incentive grants of $100 to $200 per year to parents of children who study a foreign language for at least six years of primary and secondary school. Rhode Island and Massachusetts, for example, might encourage the study of Portuguese. In a decade or less, we could begin to graduate thousands of students competent in Portuguese and fully prepared for the study of the language at the college level. In this regard we can also make good use of our cultural diversity. Within our immigrant groups there are qualified speakers of almost all of the world's languages, and they form an important resource for inexpensive crash programs in many languages.

In his book *The Tongue-Tied American*, Congressman Paul Simon gives a survey of language requirements in 76 other nations, none of which approach our incompetence in foreign language. Some of the countries he surveyed are ones we think of as culturally arrogant, such as France; many, such as Chad, we think of as hopelessly backward. All are well ahead of us in the teaching of foreign language. All require knowledge of at least one foreign language by the end of secondary school, and some require knowledge of two. It is only after one has studied foreign languages for 8 to 12 years that one is prepared to study a language at a level worthy of college credit.

Still, the most serious threat to intellectual capital formation is posed by present plans to sharply reduce federal financial aid to college and university students. In this connection, we need to address two questions: how do we insure that no young American will be denied access to higher education because of an inability to pay, and how can we develop a system that will guarantee loan repayment?

Whatever intellectual capital has been formed in our high school seniors is scattered among them without regard to the financial status of their parents. While it is true that the children of the affluent will, as a group, have had access to superior elementary and secondary education, and the children of the poor will, as a group, have been shortchanged to varying degrees in those areas, the brightest and most promising students will appear in all social and economic groups.

Any system of higher education that allocates superior education according to parental income will, in addition to committing a grave injustice, waste intellectual capital built up at great cost from pregnancy through twelfth grade.

The ideal system of financing higher education would make family income as irrelevant as possible to the attainment of higher education. The cuts proposed for the Pell Grant and Supplemental Grant programs—unless replaced by some alternative—will have the effect of making family income a greater determinant of access and choice in higher education than it now is.

I do not propose that President Reagan go back on the commitments that led to his mandate for change. Rather, an entirely new system for financing higher education should be implemented that would provide educational opportunity—both in access and in choice—more equally than would anything dreamed of by the Democrats. And, within a few years, the system would reduce the federal role in higher education more drastically than would anything proposed by the Republicans.

This comprehensive plan for the financing of higher education I have called the Tuition Advance Fund (TAF). Under the plan, any degree candidate in an accredited institution could be advanced up to $7,500 (in 1982 dollars) for educational ex-

penses, of which no more than $1,000 could be for nontuition expenses. After graduation, students would repay through a new payroll withholding tax administered by the IRS and ranging from 1 to 6 percent, depending on gross income. There would be no repayment in the case of incomes less than $5,000. For incomes between $5,000 and $10,000, the repayment would be at 1 percent, between $10,000 and $20,000 at 2 percent, between $20,000 and $30,000 at 3 percent, between $30,000 and $40,000 at 4 percent, between $40,000 and $50,000 at 5 percent, and above $50,000 at 6 percent. This repayment would continue until one-and-one-half times the original had been repaid. This excess of repayment over advance would insure the fund against the unemployment and early death of some of those who had received advances. Within 20 years the fund would become self-supporting and would constitute a vast national endowment for the education of college and university students. Within 30 years, every cent appropriated to the fund out of tax revenues could be returned to the federal government.

Administration of the program would be simplicity itself. A student admitted to degree candidacy at an accredited college or university would be issued an account under his or her social security number. He or she would pay tuition—or most of it—simply by presenting the account number to the bursar, who would bill the fund. After graduation, when the former student is employed and is filling out the W-2 form, he or she would check a box marked "Do you have an outstanding obligation to the Tuition Advance Fund?" His or her employer would then deduct from salary at the appropriate rate and remit the amount to the Treasury along with income and social security withholding. Analagous procedures would cover the self-employed.

The advantages of such a system hardly need to be pointed out to a readership that is heavily occupied professionally with the present financial aid system. The current method of needs assessment is grossly ineffective: the federal government has estimated that 35 percent of parental income statements contain some element of deception or fraud. Another serious problem is caused by the bogus "independent" student, who says, "Yes, my father does make $100,000 a year, but that's not relevant to my situation; he has cut me off without a penny." Sometimes such claims are true and should be taken into consideration; more often, they are false, made merely to get around an inconvenient income ceiling. Even when there is no element of fraud, a thoroughly equitable system of financial aid would require elaborate and intrusive evaluation of family situations that no university or office of education is qualified to make, or could make under the Constitution.

TAF solves these problems by a dramatic revision of the concept of need: the student is dealt with as an individual, rather than as a member of a family. And the great majority of students, taken as individuals, are close to indigence —their need is roughly equal to their educational expenses. It makes much better sense to consider them all as paupers for the moment and then to exact repayment at a rate automatically indexed to their relative prosperity in later life.

Even if we consider students as members of a family, the fact is that 95 percent of the families in America need some help to see one child through school, and substantial help to see more than one through school at the same time. Should we deny a rational system of aid to the 95 percent simply because it may benefit the 5 percent? In a parallel case, that of the public highways, we decided to dispense with a needs test. Because we recognize that relatively few people can afford helicopters or to build their own roads, we do not ask for a Form 1040 from someone who wants to drive on an interstate highway. We ought to understand that similar principles should cover the provision of guaranteed-repayment advances for college tuition.

The Tuition Advance Fund also offers major advantages in collection. The present system is no better at collection than at needs assessment. Default on Guaranteed Student Loans is currently running about 12.3 percent across the board and above 25 percent in some institutions; the government has paid $1.7 *billion* in defaulted loans, a sum which is about one-third of the 1980 national loss from theft of all sorts, about two-thirds of the loss from burglary, nearly equal to the loss from larceny, and five times the loss from armed robbery. That is a scandal. At least as important as the financial cost of the default is the moral cost, as hundreds of thousands of young people are led to begin adult life with a massive renunciation of responsibility in which bankruptcy and default become a rite of passage.

The Tuition Advance Fund would solve this problem at a stroke: collections would be managed by the highly efficient methods of the Internal Revenue Service. This would leave persons having an obligation to repay with only three ways of defaulting: through unemployment; through death; and through Leavenworth. None is especially attractive.

Bankruptcy would *not* be an option, for TAF does not establish a conventional debt, but rather an obligation to pay a special tax at specified rates until a specified total has been reached. Though bankruptcy might wipe away all debts, there would still be an obligation to continue paying the TAF tax to the point of full repayment, retirement, or death. To judge from the record of the GSL program, nothing is less sure than debt repayment; but tax payment under the IRS code continues to run death a close second for certainty.

To fully fund this endowment for all undergraduates would cost additional annual funding equal to substantially less than 1 percent of the gross national product, about what we spend annually on tobacco. Approximately 45 percent would go to students in state-supported institutions, and about 55 percent to students in independent institutions.

Increasingly, administrators of state institutions are going to face the dilemma of having to raise tuition or reduce the quality of their institutions. The need for the Tuition Advance Fund is going to intensify in the state sector just as it has in the independent sector. The benefits are there for both.

Approximately $5 billion of the funding needed could come from programs that TAF would replace. The remainder may seem large, but it can be put into perspective by remembering that it would be about 3 percent of the operating budget of the federal government. It should be emphasized that this program would be unlike every other federal appropriation, because it would have a clear and visible sunset ahead of it: at some point in the future, the total of repayments into the fund and its investment income would be equal to the advances paid out, and the fund would no longer require tax support. Given the complexities of variables such as inflation, it is not possible to determine precisely how many years the fund would require

to become self-sustaining. But we can say with great certainty that self-funding would be attained within 12 to 20 years.

Moreover, after a further similar period, the fund would attain a surplus that would allow it to repay to the federal government all the original funding. Again, this would make TAF unique in the history of federal appropriations.

In 20 years or less the program would end the federal role in financing student aid. At the same time that it allows parents and students more generous aid for higher education than has been proposed by any Democrat, the fund provides for a higher percentage of repayment, greater individual self-reliance, and a greater reduction in federal aid to higher education than any suggested or hoped for by the Republicans.

The Tuition Advance Fund is a perfectly responsible way of funding higher education because those who receive the educational benefit in advance will pay for it during their working lifetime through payroll deductions. TAF would be fully consistent with President Reagan's supply-side economics, for it is an investment in the intellectually skilled people at many levels and in all fields. It recognizes the crucial importance of intellectual capital formation, just as the Administration already recognizes the importance of more conventional capital formation.

Despite the Soviet Union's considerable attention to intellectual capital formation, that nation's economic performance is a dismal failure that becomes more apparent by the day as dependence on western technology, western agriculture, and western finance at subsidized interest rates grows. The educational system of the Soviet Union is designed to select students for their intelligence and to give them free education according to their ability: on one hand, no individual Soviet has to pay for higher education; on the other, no Soviet can gain access to higher education at any price unless he or she is fully qualified.

If the state had a supremely accurate gauge of ability, the Soviet system might, in this regard at least, be worthy of emulation. But no state has such a gauge, and the Soviet state is particularly prone to silly bias, such as discrimination against those who possess ancestors among the "former people" — the aristocrats. Even in the ruthlessly unsentimental Soviet educational system, a good deal of intellectual capital is wasted through ideological allocation of education. Still, they probably lose less capital through miseducation than we do.

Their problem is that once an intelligent young Soviet is graduated from a college or technical institution that has educated or trained him or her to a high standard, he or she faces an economic system that is hostile to capital formation of the traditional kind.

We are more fortunate in this country. We have an economic system that leverages trained intelligence by giving it the fullest play. We can have no structural excuse for anything but a high rate of intellectual and physical capital formation.

President Reagan's policies are designed to build capital in the traditional sense and to provide the military shield that will assure the survival of the nation. However, attention to the system of education that produces intellectual capital is missing.

A number of ways for producing this capital have been outlined here, though the Tuition Advance Fund is central to the production process. If you think it worthy of your support, you should begin lobbying for it with your U.S. representatives and senators. *Most importantly, you should make converts of your own presidents.* NACUBO can, through your individual action, play a crucial role in anchoring a solid future for higher education in this country. ♦

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Business Officer (ISSN 0147-877X) is published monthly by NACUBO, One Dupont Circle, Suite 510, Washington, DC 20036, telephone 202-861-2500. Second-class postage paid at Washington, DC. Of annual membership dues, $10 is for a subscription to *Business Officer.*

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